

**Processing Software Images For Use In Generating Difference Files**

**ABSTRACT**

5        Systems and methods are provided for pre-processing original and new versions  
of files as part of difference file generation between the original and new file versions, for  
example byte-level file differencing. Software/executable changes between file versions  
include primary changes/logical changes, which are defined to be the source code  
changes, and secondary changes. The secondary changes generally result from the  
10      primary changes and are generated by the software compiler/linker utilities. The  
secondary changes include address changes, pointer target address changes, and changes  
in address offsets. The pre-processing systems and methods provided use approximation  
rules between file versions to remove/reduce the secondary changes and encode  
information relating to the removal of these changes in information of the corresponding  
15      difference file.